

Application Serial No: 10/509,463
Responsive to the Final Office Action mailed on: July 22, 2008

OCT 22 2008**IN THE CLAIMS****Amendments To The Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-4. (Cancelled)

5. (Currently Amended) An apparatus for manufacturing a thin film in which the thin film is formed on a supporting base, comprising:

a vacuum container;

a means for supporting the supporting base in an inner portion of the vacuum container;

an electron beam evaporation source that is arranged in the vacuum container so as to face a surface to be vapor-deposited of the supporting base and contains a first thin film material;

an electron beam source that is arranged in the vacuum container and emits an electron beam to be used to evaporate the first thin film material by heating using an electron beam heating method; and

a resistance heating evaporation source that is arranged in the vacuum container so as to face the surface to be vapor-deposited and evaporates a second thin film material by heating using a resistance heating method,

wherein the electron beam evaporation source, the electron beam source and the resistance heating evaporation source are arranged so that a path along which the electron beam emitted from the electron beam source reaches the electron beam evaporation source intersects with a line segment connecting the resistance heating evaporation source with the surface to be vapor-deposited,

wherein each of the first thin film material and the second thin film material is a metal film material.

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6. (Cancelled)
7. (Original) The apparatus according to claim 5, further comprising a nozzle for introducing a reactive gas in a portion on the surface to be vapor-deposited in which the thin film is to be formed.
8. (Original) The apparatus according to claim 5, further comprising a bias device for applying a bias voltage to the surface to be vapor-deposited.
9. (Original) The apparatus according to claim 5, wherein the electron beam evaporation source, the electron beam source and the resistance heating evaporation source are arranged substantially on the same plane.
10. (Previously Presented) A method for manufacturing a thin film in which the thin film is manufactured using an apparatus as claimed in claim 5.
11. (Previously Presented) The method according to claim 10, wherein the first thin film material is Co and the second thin film is Li.

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REMARKS

This Amendment is in response to the Office Action mailed on July 22, 2008. Claim 5 is amended and is supported, for example, in the specification on page 5, lines 26-27. No new matter is added. Claims 5 and 7-9 are pending with claims 10 and 11 being withdrawn.

§103 Rejections:

Claims 5, 7 and 9 are rejected as being unpatentable over Yano (US Patent Publication No. 2002/0001733) in view of Shinohara (JP 06-122969). This rejection is traversed.

Claim 5 is directed to an apparatus for manufacturing a thin film in which the thin film is formed on a supporting base that requires, among other features, an electron beam evaporation source, an electron beam source and a resistance heating evaporation source. The electron beam evaporation source is arranged in a vacuum container so as to face a surface to be vapor-deposited of the supporting base and contains a first thin film material. The electron beam source is arranged in the vacuum container and emits an electron beam to be used to evaporate the first thin film material by heating using an electron beam heating method. The resistance heating evaporation source is arranged in the vacuum container so as to face the surface to be vapor-deposited and evaporates a second thin film material by heating using a resistance heating method. The electron beam evaporation source, the electron beam source and the resistance heating evaporation source are arranged so that a path along which the electron beam emitted from the electron beam source reaches the electron beam evaporation source intersects with a line segment connecting the resistance heating evaporation source with the surface to be vapor-deposited. Claim 5 further requires that each of the first thin film material and the second thin film material is a metal film material.

The combination of Yano and Shinohara does not teach or suggest these features. The rejection relies on Shinohara for teaching that the electron beam evaporation source, the electron beam source and the resistance heating evaporation source are arranged so that a path along which the electron beam emitted from the electron beam source reaches the electron beam evaporation source intersects with a line segment connecting the